03060101-080

(Coneross Creek/Lake Hartwell)

General Description

Watershed 03060101-080 is located in Oconee County and consists primarily of ***Coneross Creek*** and its tributaries, which form an arm of ***Lake Hartwell***. The watershed occupies 68,113 acres of the Blue Ridge and Piedmont regions of South Carolina. The predominant soil types consist of an association of the Cecil-Hiwassee series. The erodibility of the soil (K) averages 0.26, and the slope of the terrain averages 11% with a range of 2-25%. Land use/land cover in the watershed includes: 64.0% forested land, 25.6% agricultural land, 6.5% urban land, 2.9% water, 0.8% forested wetland, and 0.2% barren land.

Coneross Creek flows through Coneross Creek Reservoir and accepts the drainage of White Fork. Negro Fork (Negro Fork Reservoir) enters Coneross Creek next, followed by Bear Swamp Creek, Colonels Fork Creek, Richland Creek (Halfway Branch), Perkins Creek, Snow Creek, and Speeds Creek before forming an arm of Lake Hartwell. There are a total of 136.0 stream miles and 2,546.3 acres of lake waters in this watershed, all classified FW.

Surface Water Quality

Station #	Type	Class	Description
SV-333	P	FW	CONEROSS CREEK AT S-37-13
SV-004	P	FW	CONEROSS CREEK AT SC 59
SV-236	P	FW	CONEROSS CK ARM OF LAKE HARTWELL AT S-37-184, 6.5 MI SSE OF SENECA

Coneross Creek - There are three monitoring sites along Coneross Creek. At the upstream site ***(SV-333***), aquatic life uses are partially supported due to copper excursions. There is also a significant increasing trend in total phosphorus concentration. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in turbidity suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Further downstream ***(SV-004),*** aquatic life uses are not supported due to copper excursions. There are also significant increasing trends in total phosphorus and total nitrogen concentrations. Significant decreasing trends five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are partially supported due to fecal coliform bacteria excursions. In addition, there is a significant increasing trend in fecal coliform bacteria concentration.

Aquatic life uses are fully supported at the site located in the Coneross Creek arm of Lake Hartwell ***(SV-236)***; however, there is a significant decreasing trend in dissolved oxygen concentration. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

A total maximum daily load (TMDL) has been developed for both SV-333 and SV-004 to address these impairments (see Watershed Protection and Restoration Strategies below).

A fish consumption advisory has been issued by the Department for PCBs (Polychlorinated biphenols) and includes the impounded area (Lake Hartwell) of Coneross Creek within this watershed (see advisory p.37).

Groundwater Quality

Well #	Class	Aquifer	Location
AMB-070	GB	SAPROLITE	MOUNTAIN REST DEEP
AMB-081	GB	PIEDMONT BEDROCK	MOUNTAIN REST SHALLOW

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *COMMENT*
CONEROSS CREEK OCONEE COUNTY/CONEROSS CREEK WWTP PIPE #: 001 FLOW: 7.80	SC0033553 MAJOR DOMESTIC
CONEROSS CREEK CITY OF WALHALLA/CONEROSS CREEK PIPE #: 001 FLOW: M/R	SCG641004 MINOR DOMESTIC
CONEROSS CREEK OCONEE MEMORIAL HOSPITAL PIPE #: 001 FLOW: 0.015	SCG250100 MINOR INDUSTRIAL
BEAR SWAMP CREEK TRIBUTARY AVONDALE MILLS/WALHALLA PLT PIPE #: 001 FLOW: 0.0158	SCG250114 MINOR INDUSTRIAL

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME *FACILITY TYPE*	*PERMIT #* *STATUS*
OCONEE COUNTY LANDFILL DOMESTIC	371001-1102 (DWP-084) INACTIVE
LAKE VIEW LANDFILL DOMESTIC	DWP-043 INACTIVE
OCONEE COUNTY LANDFILL DOMESTIC	371001-1101 INACTIVE
DUKE POWER-OCONEE NUCLEAR LANDFILL INDUSTRIAL	IWP-239 INACTIVE
DUKE POWER-OCONEE NUCLEAR LANDFILL INDUSTRIAL	373303-1601 (SCD043979822) ACTIVE

HURDT LAND-CLEARING LANDFILL C &D	372494-1701 INACTIVE
JP STEVENS & CO.-WEST POINT PEPPERAL INDUSTRIAL	IWP-135; IWP-186 INACTIVE
CITY OF SENECA C&D DOMESTIC	371001-1201 ACTIVE
CITY OF SENECA C&D DOMESTIC	DWP-041 INACTIVE
CITY OF SENECA TRANSFER STATION TRANSFER STATION	371001-6001 ACTIVE

Mining Activities

MINING COMPANY ***MINE NAME***	***PERMIT #*** ***MINERAL***
OCONEE COUNTY OCONEE COUNTY ROCK QUARRY	0253-73 GRANITE

Water Quantity

WATER USER ***STREAM***	***TOTAL PUMP. CAPACITY (MGD)*** ***RATED PUMP. CAPACITY (MGD)***
CITY OF WALHALLA CONEROSS CREEK	4.3 2.9
CITY OF WALHALLA NEGRO FORK	0.1 0.1

Growth Potential

There is a moderate to high potential for growth in this watershed, which contains portions of the Cities of Walhalla and Seneca and the Town of Westminster. Residential, commercial, and industrial growth is expected along the U.S. Hwy 123 corridor from Westminster through Seneca to Clemson, as well as along S.C. Hwy 28 from Seneca through West Union to Walhalla.

Seneca, in particular, is considered one of the largest manufacturing areas in the upstate region. Growth of the manufacturing industry is dependent on infrastructural expansion, which is dependent on the capacity of existing facilities. The regional wastewater treatment facility has expanded and is able to support future growth.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A TMDL was developed to determine the maximum amount of fecal coliform bacteria Coneross Creek can receive from point and nonpoint sources and still meet water quality standards. EPA's

BASINS model (HSPF) was used to calculate the continuous in-stream concentration of fecal coliform bacteria. Based on this estimation, we calculated the sum of the allowable loads of the single pollutant from all contributing point and nonpoint sources. This TMDL includes a margin of safety and seasonality to ensure that the waterbody can be used for the recreational use purposes that the State has designated. This TMDL recommends a reduction of 50% in the loading from unidentified sources, which includes sanitary sewers overflows, leaking sanitary sewers, failing septic systems, and direct discharges.

Special Projects

TMDL Implementation Underway in Coneross Creek/ Beaverdam Creek Watersheds

Funded through a §319 grant from EPA, a new effort to combat bacterial pollution in two adjacent watersheds in Oconee County began in December 2002. Acting as lead organization, the Clemson Cooperative Extension Service (CES) initiated a two-year project that promises to implement bacteria runoff control measures in critical areas throughout the watersheds. If successful, this implementation project will result in improved water quality and consistent attainment of water quality standards for fecal coliform bacteria. An approximate 50% reduction is needed in the Coneross Creek watershed to meet fecal coliform standards.

To achieve this goal, the project sponsor will implement a combination of BMPs on a watershed scale that include detailed waste and grazing management procedures, engineered BMPs focusing on riparian zones, septic system upgrades including constructed wetlands, and an extensive educational campaign targeted towards homeowners. Clemson CES has recruited a number of partners in this effort including the USDA/NRCS, Oconee County Soil and Water Conservation District, Oconee County Beef Cattlemen's Association, and the SCDHEC Oconee County Health Department. The Beaverdam Creek/Coneross Creek TMDL Project, using the diverse expertise available in this partnership, should result in demonstrable improvement to water quality in these watersheds.